JAN/FY06

FORT BUCHANAN

Puerto Rico

Army Defense Environmental Restoration Program Installation Action Plan

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Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Installation Cleanup Program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and propose a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

In an effort to coordinate planning information between the restoration manager, Installation Management Agency-Army Reserve Office (IMA-ARO), Fort Buchanan, U.S. Army Environmental Center (USAEC), executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all major Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

The following agencies contributed to the formulation and completion of this IAP during a planning workshop held on 4 - 5 January 2005:

Company/Installation/Branch

Engineering & Environment Inc. for IMA-ARO Engineering & Environment Inc. for USAEC Environmental Quality Board Fort Buchanan IMA-ARO US Environmental Protection Agency (USEPA)

Acronyms & Abbreviations

AEDB-CC Army Environmental Database-Compliance-Related Cleanup

AEDB-R Army Environmental Database-Restoration

BRAC Base Realignment and Closure

CERCLA Comprehensive Environmental Response, Compensation and Liability

Act of 1980

CMI(C) Corrective Measures Implementation (Construction)
CMI(O) Corrective Measures Implementation (Operations)

CMS Corrective Measures Study
CS Confirmation Sampling
CTC Cost to Complete
DD Decision Document

DERP Defense Environmental Restoration Program

DES Design

DoD Department of Defense

EBS Environmental Baseline Study

FS Feasibility Study
FY Fiscal Year

IAP Installation Action Plan

IMA-ARO Installation Management Agency-Army Reserve Office

IRA Interim Remedial Action

IRP Installation Restoration Program

K Thousand

LTM Long Term Management MC Munitions Constituent

MEC Munitions & Explosives of Concern MMRP Military Munitions Response Program

NFA No Further Action
NPL National Priorities List
PA Preliminary Assessment
PCB Polychlorinated Biphenyl

PREQB Puerto Rico Environmental Quality Board

RA Remedial Action

RAB Restoration Advisory Board RAC Risk Assessment Code

RA(C) Remedial Action (Construction)
RA(O) Remedial Action (Operations)

RC Response Complete

RCRA Resource Conservation and Recovery Act

RD Remedial Design

REM Removal

RFA RCRA Facility Assessment
RFI RCRA Facility Investigation
RI Remedial Investigation
ROD Record of Decision

SI Site Inspection

SWMU Solid Waste Management Unit

Acronyms & Abbreviations

TAPP Technical Assistance for Public Participation

TRC Technical Review Committee
USAEC US Army Environmental Center

USAG US Army Garrison USAR US Army Reserve

USEPA US Environmental Protection Agency

Acronyms & Abbreviations

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) Acronym Conversions

CERCLA Preliminary Assessment (PA)	=	RCRA Facility Assessment (RFA)
Site Inspection (SI)	=	Confirmation Sampling (CS)
Remedial Investigation/ Feasibility Study (RI/FS)	=	RCRA Facility Investigation/Corrective Measures Study (RFI/CMS)
Remedial Design (RD)	=	Design (DES)
Remedial Action (Construction) (RA(C))	=	Corrective Measures Implementation (Construction) (CMI(C))
Remedial Action (Operation) (RA(O))	=	Corrective Measures Implementation (Operation) (CMI(O))

Long Term Management (LTM) = Long Term Management (LTM)

Interim Remedial Action (IRA) = Interim Remedial Action (IRA)

Installation Information

Installation Locale: Fort Buchanan is located within the San Juan Metropolitan Area, located on the north coast of Puerto Rico. Puerto Rico is the smallest of the Greater Antilles that separates the Caribbean Sea from the Atlantic Ocean. The installation lies approximately six miles southwest of the old San Juan and occupies approximately 746 acres within two municipalities, Bayamón and Guaynabo. Physiographically, Fort Buchanan is located on the northern coastal plain of Puerto Rico, which is about five miles wide and slopes gently upward to the central mountain chain, called the Cordillera Central.

A busy commercial area lies to the east of Fort Buchanan outside the East Main Gate. State Road PR-2 connects San Juan with the municipalities of Guaynabo and Bayamón, and the surrounding shopping areas, restaurants, and other businesses. Fort Buchanan is surrounded at the northeast by an industrial park known as Amelia Industrial Park, and at the northeastern corner by a federal detention center. The Caribbean Gulf Refinery and the Puerto Rico Department of Corrections, which houses persons in a witness protection program, occupies land to the west of the installation. A privately owned wooded area lies to the southwest, and numerous residential areas including Tintillo Gardens, Villa Caparra, Chalets de Caparra, Villa España, Tintillo Hills and Victor Bragger lie to the south.

Installation Mission: Fort Buchanan is the only active Army Post in the Caribbean Basin area. It continues to support the reserve components and active component soldiers in Puerto Rico and U.S. Virgin Islands as a power projection platform to mobilize the nation's only fully bilingual and bicultural force, a definite asset for Department of Defense (DoD) relations with central and South America. Its principal mission is the mobilization, readiness and actual deployment of some 15,000 reserve Component soldiers in Puerto Rico and the U.S. Virgin Islands. The installation also provides support to DoD operations in the Caribbean area (e.g. Operation Restore Democracy).

Lead Organization:

IMA-ARO

Lead Executing Agencies:

Investigation Phase: US Army Corps of Engineers, Baltimore District **Remedial Action Phase:** US Army Corps of Engineers, Baltimore District

Regulatory Participation:

Federal: US Environmental Protection Agency, Caribbean Field Office, Region II

Commonwealth: Puerto Rico Environmental Quality Board (PREQB)

National Priorities List (NPL) Status: Not on NPL

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status: No RAB, TRC or TAPP exists at Fort Buchanan.

Installation Information

Installation Program Summaries IRP

Primary Contaminants of Concern: to be determined

Affected Media of Concern: to be determined

Estimated Date for Response Complete (RC): 2008 Funding to date (up to Fiscal Year (FY)05): \$646,580

Current year funding (FY06): \$399,150 Cost-to-Complete (CTC) (FY07+): \$377,000

MMRP

Primary Contaminants of Concern: Munitions and Explosives of Concern (MEC), Munitions

Constituent (MC), Metals

Affected Media of Concern: Soil, Groundwater

Estimated Date for RC: 2017 Funding to date (up to FY05): \$0 Current year funding (FY06): \$0

CTC (2007+): \$6,303,000

Cleanup Program Summary

Installation Historic Activity

In 1903, the first Puerto Rican U.S. Army unit was established (the Puerto Rico Regiment) under the command of Lieutenant Colonel James A. Buchanan. "Camp Buchanan" was established in 1923. It was originally located on a 300 acre tract of land some six miles south of San Juan Bay.

From 1926 to 1930 Camp Buchanan was used as a maneuver training area and range by the Regular Army, by the National Guard troops and as a Citizen Military Training Camp. In May 1940 it was designated as Fort Buchanan and expanded to 1,514 acres initially, later to 4,500 acres. Permanent facilities were constructed.

During World War II, Fort Buchanan housed a depot supplying the Army Antilles Department. It also processed local troops through its replacement center. The industrial complex included pier facilities, ammunition storage areas, and extensive railroad network connecting it to the bay.

After World War II, the post was gradually reduced in size to its present 476 acres. The post continued to be used throughout the Korean War as a supply and replacement depot.

Until closure as an Army post in 1966, it remained a Command Depot with post facilities, a personnel center, and a special training center. With the deactivation of the Antilles Command on December 31, 1966, Fort Buchanan came under U.S. Navy control. A detachment of approximately 100 personnel remained as a residual element designated at U.S. Army Command Group and placed under command of the U.S. Army Forces Southern Command in Panama, this element consisted of a small command group and support detachment, Rodriguez U.S. Army Hospital (Inactivated in 1971), and advisory groups for the U.S. Army Reserve, the national Guard and the Reserve Officers' Training Corps. While not organic to the command, an Armed Forced Examining and Entrance Station and Intelligence Corps Detachment (inactivated in 1971) also received support from the command.

In December 1971, Fort Buchanan returned to U.S. Army control under the Third Army. It continued to support the Army Reserve, including support of seven Army Reserve Centers throughout Puerto Rico. It became host to a number of tenant activities of the Reserve components, Navy, Coast Guard, Air Force and several non-military federal agencies.

On July 1, 1973 as a result of Army reorganization, Camp Buchanan was redesignated as US Army Garrison (USAG), Fort Buchanan under direct control of Headquarters US Army Forces Command. Initially the Commander, USAG, commanded the Senior Army Advisors to the US Army Reserve (USAR) and NG elements in Puerto Rico and the U.S. Virgin Islands, the Readiness Group, and USAR.

Cleanup Program Summary

IRP

- Prior Year Progress: Final RFA completed in PREQB in 1990, Environmental Baseline Study (EBS) completed in 1995, Draft RFI work plan completed in 2005.
- Future Plan of Action: Complete RFI.

MMRP

- Prior Year Progress: Closed Transferring and Transferred Range Inventory completed in 2003
- Future Plan of Action: The installation plans to complete the SI for FTB-001-R-01 in 2007.

FORT BUCHANAN

Installation Restoration Program



Total Army Environmental Database-Restoration (AEDB-R) IRP Sites / AEDB-R sites with Response Complete: 20/19

Different Site Types:

8 Spill Site Area 3 Underground Storage Tank

3 Storage Area 2 Landfill

2 Contaminated Buildings 1 Unexploded Munitions/Ordnance

1 Contaminated Groundwater

Most Widespread Contaminants of Concern: To be determined

Media of Concern: To be determined

Completed Removal (REM)/IRA/Remedial Action (RA):

1999 – FTB-030 – RA Completed

Total IRP Funding

Prior years (up to FY05): \$ 646,580 Current year funding (FY06): \$ 399,150 <u>Future Requirements (FY07+):</u> \$ 377,000 Total: \$1,422,730

Duration of IRP

Year of IRP Inception: 1983 Year of IRP RC: 2008

Year of IRP Completion including Long Term Management (LTM): 2008

IRP Contamination Assessment

IRP Contamination Assessment Overview

Ft Buchanan received notice from USEPA Region II in January 2005 that required additional investigation of 15 sites that were previously identified in the RFA or EBS studies.

IRP Cleanup Exit Strategy

Complete RFI sampling. If impacts to soil, groundwater or surface water media are indicated by analytical data, a baseline risk assessment will be conducted and sites will be opened in AEDB-R or Army Environmental Database-Compliance-Related Cleanup (AEDB-CC) to address areas of concern as per DoD and USEPA cleanup guidance. CMS alternatives will be considered based on the results of the baseline risk assessment. CMI(C) will be implemented where necessary.

If no contamination is found, No Further Action (NFA) will be requested.

Previous Studies

1984

• Installation Assessment of Fort Buchanan, Environmental Science & Engineering Inc. and US Army Toxic and Hazardous Materials Agency

1997

• Environmental Baseline Survey, USAEC, January

FORT BUCHANAN

Installation Restoration Program
Site Descriptions

SITE WIDE INV. SITE WIDE INVESTIGATION

SITE DESCRIPTION

Ft Buchanan received notice from EPA region II in January 2005 that requires additional investigation of previous sites identified in RFA and EBS studies.

The following 15 sites were identified in the letter:

- Solid Waste Management Unit (SWMU) 1
 Old Hazardous Waste Containers
- SWMU 3 Pesticides and Chemicals Burial Trench
- SWMU 4 Spent Solvents Storage Area
- SWMU 5 Polychlorinated Biphenyl (PCB)
 Transformers Storage Area #1
- SWMU 6 PCB Transformers Storage Area #2

STATUS

REGULATORY DRIVER: RCRAC

RRSE: Low

CONTAMINANTS OF CONCERN:

Unknown

MEDIA OF CONCERN: Unknown

<u>Phases</u>	Start	<u>End</u>
RFA	198309	198403
RFI/CMS	200503	200809

RC DATE: 200809

- Area of Concern 2 Pesticide Storage and Formulating Area #2
- Building 541
- Building S-563
- Used Oil Staging Area
- 65th Army Reserve Command Refueling Area
- Heavy Equipment Storage Area
- Old Landfill
- Potential Hazardous Material Burial Site
- Small Arms Firing Range (MMRP site FTB-001-R-01)
- Building S-159

CLEANUP STRATEGY

USAEC is currently preparing an RFI Work Plan in conjunction with USEPA Region II and PREQB in order to address the sites listed above. Completion of the work plan is anticipated in February 2006.

If impacts to soil, groundwater or surface water media are indicated by analytical data, a baseline risk assessment will be conducted and sites will be opened in AEDB-R or AEDB-CC to address areas of concern as per DoD and USEPA cleanup guidance. CMS alternatives will be considered based on the results of the baseline risk assessment. CMI(C) will be implemented where necessary.

If no contamination is found, NFA will be requested.

IRP No Further Action Sites Summary

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
FTB-001	DEH Motor Pool/Shop Building 556	Study Completed, No Cleanup Required	198403
FTB-002	Antiles School Sys Motor Pool/Shop	Study Completed, No Cleanup Required	199510
FTB-003	Area wide Military Support Activity MP	Study Completed, No Cleanup Required	198403
FTB-006	Directorate of Personnel and CA AC Shop	Study Completed, No Cleanup Required	198403
FTB-007	PX Service Station	All Required Cleanup(s) Completed	199201
FTB-008	Wash Rack Building 538	Study Completed, No Cleanup Required	198403
FTB-012	MEDDAC Lab Building 518	Study Completed, No Cleanup Required	198403
FTB-013	Vet Lab	Study Completed, No Cleanup Required	198403
FTB-015	Building 556 Pesticide Storage	Study Completed, No Cleanup Required	198403
FTB-016	Building 539 Pesticide Storage	All Required Cleanup(s) Completed	199101
FTB-017	Pesticide Burial N PR 28	Study Completed, No Cleanup Required	199507
FTB-019	DEH UST Building 556	Study Completed, No Cleanup Required	198403
FTP-027	Photo Lab DPTSEC/TSC	Study Completed, No Cleanup Required	198403
FTB-028	Construction Landfill	Other	198403
FTB029	Abandoned UST Bldg 152	Study Completed, No Cleanup Required	199710
FTB-030	Comp-Asbestos Abatement AFH (BRAC)	All Required Cleanup(s) Completed	199908
FTB-031	Comp Ft Buchanan Lead Based Paint Abatement	Not Eligible For ER,A/Base Realignment and Closure (BRAC) Funding	199908
FTB-032	UXO Archive/Search/Surve y and Removal	Study Completed, No Cleanup Required	199710
FTB-033	Characterize NRC Licensed Material	Study Completed, No Cleanup Required	199710

IRP Schedule

Initiation of IRP: 1983

Past Phase Completion Milestones 1984

- PA at FTB-001, FTB-002, FTB-003, FTB-006, FTB-007, FTB-008, FTB-012, FTB-013, FTB-017, FTB-027, FTB-028 March
- SI at FTB-001, FTB-002, FTB-003, FTB-006, FTB-007, FTB-008, FTB-012, FTB-013, FTB-017, FTB-027, FTB-028 March
- RA(C) at FTB-007 March
- RFA at FTB-015, FTB-016, Site Wide Inv. March
- CS at FTB-015, FTB-016 March
- Initial Site Characterization at FTB-019 March
- Investigation at FTB-019 March

1993

- PA at FTB-030 May
- SI at FTB-030 June
- RI/FS at FTB-030 July
- RD at FTB-030 August
- RI/FS at FTB-017 December

1997

- Initial Site Characterization at FTB-029 October
- PA at FTB-031 October
- PA at FTB-032 October
- PA at FTB-033 October

1999

• RA(C) at FTB-030 July

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates: To be determined

Projected Construction Completion Date of IRP: 2008

Schedule for Next Five Year Review: Unknown

Estimated Completion Date of IRP (including LTM phase): 2008

FORT BUCHANAN IRP SCHEDULE

(Based on current funding constraints)

AEDB-R#	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
SITE WIDE INV.	RFI/CMS									



Prior Years Funds

Total Funding up to FY04: \$486K

(may be listed by project instead of site)

Year Site Information Expenditures FY Total FY05 RFI Site Wide Inv. \$160.58K \$160.58 K

Total Prior Year Funds: \$646.58K

Current Year Requirements

Year Site Information Expenditures FY Total FY06 RFI Site Wide Inv. \$399.15K \$399.15K

Total Future Requirements: \$377K

Total IRP Cost (from inception to completion of the IRP): \$1,422.73K

FORT BUCHANAN

Military Munitions Response Program

MMRP Summary

Total AEDB-R MMRP Sites / AEDB-R sites with Response Complete: 2/0

AEDB-R Site Types

1 Small Arms Range 1 Firing Range

Most Widespread Contaminants of Concern: MEC, MC, Metals

Media of Concern: Soil, Groundwater

Completed REM/IRA/RA:

None

Total MMRP Funding

Prior years (up to FY05): \$0 Current Year (FY06): \$0

<u>Future Requirements (FY07+): \$6,303,000</u> Total: \$6,303,000

Duration of MMRP

Year of MMRP Inception: 2002 Year of MMRP RC: 2017

Year of MMRP Completion Including LTM: 2047

MMRP Contamination Assessment

MMRP Contamination Assessment Overview

Two MMRP sites have been identified at Fort Buchanan.

MMRP Cleanup Exit Strategy

The installation plans to complete the SI by 2007 and execute follow on phases/actions as required in the individual site cleanup strategies.

Previous Studies

1997

• Archive Search Report, USACE St. Louis District, October

2003

• Preliminary Assessment, Phase 3 Army Closed, Transferring, and Transferred Ranges/Sites Inventory for, Fort Buchanan

FORT BUCHANAN

Military Munitions Response Program Site Descriptions

FTB-001-R-01 CAMP BUCHANAN TRAINING AREA

SITE DESCRIPTION

This former training area consisted of a 190-acre 600 yard range used to train with mortars. It is located on the eastern boundary of Fort Buchanan. It is believed both live and practice mortars were used on the range. Small arms were also used on this range. It was actively used from 1923 to 1940. The range had three firing points and a target butt oriented towards the hills to the north of Fort Buchanan that served as a buffer zone. The training area was destroyed during the expansions of the fort in early 1940s. A golf course, a baseball field, and some buildings were built on the property once occupied by the training area and are still in use today. There have been two incidents where mortars have been found inside the former range area. Two mortars were found in 1995 on the baseball field and one mortar round was found in 2002 on the border of the former range area near a fence. The suspected munitions were turned over to a Navy Explosive Ordnance Disposal team out of Naval Station Roosevelt Roads and they took responsibility for disposing of the items. Fort

STATUS

REGULATORY DRIVER: CERCLA

RISK ASSESSMENT CODE (RAC) SCORE: 1 - Serious

CONTAMINANTS OF CONCERN: MEC, MC, Metals

MEDIA OF CONCERN: Soil, Groundwater

Phases	Start	End
PA	200204	200305
SI	200610	200709
RI/FS	201110	201209
RD	201510	201609
RA(C)	201610	201709
LTM	201710	204709

RC DATE: 201709

Buchanan was listed as a BRAC site in 1995 at which time a BRAC AEDB-R site was opened concerning the 1995 incident. The AEDB-R flag included the MEC/MC clean up. When Fort Buchanan was removed from the BRAC list at the end of 1997, the AEDB-R site was closed out and the site was listed as response complete. Yet, no comprehensive MEC/MC investigation was ever completed.

CLEANUP STRATEGY

An installation wide SI and Archive Search Report will be assigned to this site. An RI/FS including the installation of groundwater monitoring wells will be completed followed by excavation and off-site waste transportation and disposal.

FTB-002-R-01 PUNTA SALINAS RIFLE RANGE

SITE DESCRIPTION

This site consists of a 99 acre rifle range where only small arms were used during Korean and Vietnam Wars. It is located on beachfront property and is currently a public beach/recreation area.

CLEANUP STRATEGY

An installation wide SI will be assigned to this site. An RI/FS including the installation of groundwater monitoring wells will be completed.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: 5 – Negligible Risk

CONTAMINANTS OF CONCERN:

MEC, MC, Metals

MEDIA OF CONCERN: Soil,

Groundwater

Phases	Start	End
PA	200305	200309
SI	201509	201610
RI/FS	201611	201710

RC DATE: 201710

MMRP Schedule

Initiation of MMRP: 2002

Past Phase Completion Milestones

2003

• PA Completed

Projected ROD/DD Approval Dates: 2012 & 2017

Projected Construction Completion: 2017

Schedule for Five Year Reviews: Unknown

Estimated Completion Date of MMRP including LTM: 2047

FORT BUCHANAN MMRP SCHEDULE

(Based on current funding constraints)

AEDB-R#	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
FTB-001-R-01	SI									
	RI/FS									
	RD									201609
	RA(C)									201709
	LTM									204709
FTB-002-R-01	SI									201610
	RI/FS							·		201710

MMRP Costs

Prior Years Funds

Total Funding up to FY04: \$0K

(may be listed by project instead of site)

Year Site Information Expenditures FY Total \$0K

Total Prior Year Funds: \$0K

Current Year Requirements

Year Site Information Expenditures FY Total \$0K

Total Future Requirements: \$6,303K

Total IR Program Cost (from inception to completion of the IRP): \$6,303K

Community Involvement

Fort Buchanan does not currently have a RAB. A RAB was formed in 1995 during the BRAC initiative, however it was disbanded in 2000 when the BRAC process concluded and Fort Buchanan did not have any active restoration sites. Based on the results of the Phase I RFI a public involvement plan will be written.